United States Department of the Interior
Bureau of Land Management

FINDING OF NO SIGNIFICANT IMPACT and DECISION RECORD

ENVIRONMENTAL ASSESSMENT FOR 9 BLM ALLOTMENTS
LOCATED IN THE
RIO CHAMA – RIO GRANDE WATERSHED

DOI-BLM-NM-F020-2011-0022-EA

U.S. Department of the Interior
Bureau of Land Management
Taos Field Office
226 Cruz Alta Road
Taos, New Mexico 87571
575-758-8851

BLM

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Based on the analysis of potential environmental impacts contained in the attached Environmental Assessment DOI-BLM-NM-F020-2011-0022-EA, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Environmental Assessment for 9 BLM Allotments Located in the Rio Chama – Rio Grande Watershed will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

_____ _____

Authorized Officer Date

DECISION RECORD

ENVIRONMENTAL ASSESSMENT FOR 9 BLM ALLOTMENTS LOCATED IN THE RIO CHAMA – RIO GRANDE WATERSHED

DOI-BLM-NM-F020-2011-0022-EA

Decision

It is my decision to proceed with the issuance of the grazing leases for the allotments within the Rio Chama – Rio Grande Watershed as described in the **Proposed Action**, Alternative B, within the Environmental Assessment DOI-BLM-NM-F020-2011-0022-EA. The allotments include: 00513 La Cejita, 00514 Cerro Azul, 00515 Glen Woody Bridge, 00517 Hondo, 00522 Sebastian Martin, 00528 Arroyo del Palacio, 00529 Canada Ancha, 00539 Alamos, and 00636 Pajarito. The decision incorporates by reference the terms and conditions specified in section 2.1 and Appendix 1of the EA and other terms and conditions attached to all permits and leases.

Land Use Plan Conformance

As discussed in section 1.3, the Proposed Action is in conformance with the 1988 Taos Resource Management Plan (RMP), as amended, which specifically provides for the management actions considered in this EA.

Rationale for Decision

Based upon the rangeland health functionality analysis and the findings included in the environmental assessment, the grazing leases will not cause any unnecessary or undue environmental degradation. This action sufficiently meets the purpose and need for the action in a manner which conforms to the 1988 Taos Resource Management Plan, as discussed above.

As discussed under section 5.2 of the EA, public involvement was encouraged in the preparation of the EA, including the solicitation of public comments on the allotment evaluations. However, the Taos Field Office did not receive any comments during the preparation of the documents.

Opportunity to Appeal

Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the Final Decision, a notice of appeal must be filed in the office of the Authorized Officer at Taos Field Office, 226 Cruz Alta Road, Taos, New Mexico 87571. If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the Authorized Officer.

_____ _____

Authorized Officer Date

Attachments: Environmental Assessment DOI-BLM-NM-F020-2011-0022-EA

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ENVIRONMENTAL ASSESSMENT FOR 9 BLM ALLOTMENTS LOCATED IN THE RIO CHAMA – RIO GRANDE WATERSHED

DOI-BLM-NM-F020-2011-0022-EA

Chapter 1: Introduction

1.1 Background

One of the major uses of public lands administered by the Bureau of Land Management (BLM) has traditionally been the grazing of cattle, sheep or horses for the benefit of individuals and communities throughout the western United States. This use is provided for and regulated by public land legislation, including the Taylor Grazing Act, the Endangered Species Act, the Federal Land Policy and Management Act, and the Public Rangelands Improvement Act.

This document provides information necessary to consider authorizing grazing leases within the Rio Chama – Rio Grande watershed in Rio Arriba County, New Mexico. The allotments addressed in this environmental assessment include: 00513 La Cejita, 00514 Cerro Azul, 00515 Glen Woody Bridge, 00517 Hondo, 00522 Sebastian Martin, 00528 Arroyo del Palacio, 00529 Canada Ancha, 00539 Alamos, and 00636 Pajarito. Individual allotment maps are available at the Taos Field Office (TFO) or can be obtained by visiting www.geocommunicator.gov.

1.2 Purpose and Need for Action

The purpose of this action is to provide for livestock grazing on an allotment basis in a manner that promotes healthy, sustainable rangeland ecosystems. Grazing leases on some of the allotments identified above are due to expire or have had applications for grazing preference submitted to the BLM. Since objectives for rangeland health are appropriately applied on a watershed basis, the BLM needs to consider grazing leases on each of these allotments on a watershed basis to ensure legislative compliance and conformance with the applicable land use plan.

1.3 Land Use Plan and Grazing Regulations Conformance

The proposed permit/lease renewals within this document are in conformance with the Taos Resource Area Management Plan (1988, as Amended), which analyzed livestock grazing on a resource area-wide basis. The Taos Field Office is currently in the process of revising the Resource Management Plan (RMP), and issued a draft for public review and comment in June 2010. The Proposed Action is consistent with any revisions proposed in the draft RMP.

In conjunction with the Statewide Resource Management Plan Amendment and Environmental Impact Statement for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management and 43 Code of Federal Regulations 4180 an Allotment Evaluation (AE) document is required to determine if allotments are meeting standards and guidelines. An AE has been prepared for each allotment and is available for review at the TFO as well as a Determination Document (DD) for those allotments found to be not meeting standards. Both the AE and the DD were provided for comment to permittees/lessees and the interested public and can be obtained from the TFO.

Allotments 00514, 00515, and 00636 are not currently meeting Standards. Causal factors are attributed to the lack of fire or natural disturbance and possible historic grazing resulting in the dominance of sagebrush and a reduction of herbaceous vegetation. The Determination Documents outline the need for

vegetation manipulations to bring the allotment into conformance with the Standards. These actions would be addressed in forthcoming NEPA documents when funding becomes available.

1.4 Identification of Issues

In January of 2007, 2008, 2009 and 2010 meetings were held with the BLM interdisciplinary team to inform them that these permits\leases needed to be renewed, and this warranted a field visit to determine if Standards and Guidelines are being met in the subject allotments. Also, a letter was sent to the affected permittees and all interested publics during July 2007, May 2008, June 2009, and June 2010 to inform them that the subject allotments were being visited to assess Standards and Guidelines. Field evaluations were conducted during the summer of 2007, 2008 and 2010. The resulting AEs and DDs were provided to the affected lessee and interested publics from March 16 to March 30, 2011, for an opportunity to review and comment on the evaluations.

Based on these efforts, the following issues have been determined relevant to the analysis of this action:

1.4.1 Water Quality

- Potential for livestock grazing in the subject allotments to contribute to the degradation of water quality in the Rio Chama – Rio Grande Watershed.

1.4.2 Wildlife

- Potential for competition with big game for forage resources and habitat.

1.4.3 Soils

- Potential for livestock grazing to impact soil erosion.

1.4.4 Upland Vegetation

- Potential for livestock grazing to impact vegetation diversity or modify vegetative structure.

The following issues were considered but dismissed from analysis:

- **Air Quality:** The Clean Air Act Amendments in 1990 required that all federal actions conform to State Implementation Plans for air quality. The subject allotments are not located in or near a non-attainment area.

- **Cultural Resources:** Allotment 00513 has one recorded site, the battle of Embudo which is along the Apodaca Trail. This site is when a battle between American forces of dragoons and volunteers and the Taos natives occurred in 1847 over the murder of Governor Bent. The Embudo pass road has long since eroded but a few pecked crosses on boulders may mark the scene of the battle. Allotments 00514, 00517, contain lithic scatter sites. Multiple sites have been found on allotments 00528 and 00529. Most of them consist of lithic scatters, ceramic scatters, features resembling structures and structures. The Ojo del Zorro Pueblo and La Caja Pueblo are two of the better know pueblos within the allotments. Allotment 00539 contains multiple sites from lithic scatters to gravel mulch gardens. Allotment 00636 has one lithic scatter. Only slight adverse affects associated with past livestock grazing have been documented, and it was determined that no affects are expected from the continuance of livestock grazing in any allotments.

- **Native American Religious Concerns**: There have been no areas of concern identified within the subject allotments to date. All tribes within the Field Office boundary will receive further opportunities to provide information on any areas of concern in or near the subject allotments.

- **Noxious Weeds:** During visits to the subject allotments for evaluation of Standards and Guidelines no noxious weeds were encountered. New Mexico state listed noxious weeds found in the general area of the allotments include: black henbane, Dalmatian toadfax and downy brome. Under BLM regulations supplemental feed is only allowed after authorization by the BLM. The TFO will only authorize certified weed free supplements as a mitigation measure for noxious weeds.

- **Special Designations:** Allotments 00514, 00515 and 00636 are within the Lower Gorge ACEC. The Lower Gorge ACEC was designated to recognize the areas value for recreation, wildlife habitat and riparian vegetation. In accordance with this designation livestock are not allowed to graze within the riparian areas. A portion of allotment 00515 is within the Rio Grande Wild and Scenic designation. However, in accordance with the Rio Grande Corridor Plan, no livestock grazing is permitted within the river corridors. Allotments 00528 and 00529 are within the Fun Valley SMA which was designated primarily for the high use of off-highway vehicles.

- **Threatened or Endangered Species or BLM Sensitive Species:** Federally listed threatened (T) and endangered (E) species in Taos and Rio Arriba Counties include: black-footed ferret (Mustela nigripes) (E); Southwestern willow flycatcher (Empidonax traillii extimus) (E); interior least tern (*Sterna antillarum*) (E); Rio Grande silvery minnow (*Hybognathus amarus*) (E); and Mexican spotted owl (Strix occidentalis lucida) (T). There is no designated critical habitat for any species listed by the U.S. Fish and Wildlife Service (USFWS) within the allotments. It is determined that there are no federally listed threatened or endangered species likely to be found in the subject allotments due to lack of the habitat required for these species to occur.

  Migratory Birds: The allotments are located near a migratory flyway and avian concentration area referred to as the Central Flyway. The majority of the birds that use the flyway make direct north and south journeys from breeding grounds in the North to winter quarters in the South (Birdnature.com). They are also adjacent to an Important Bird Area as designated by the National Audubon Society. BLM migratory bird species of conservation concern that have the potential to occur in the project area include golden eagle, peregrine falcon, ferruginous hawk, prairie falcon, Western burrowing owl, black-throated gray warbler, juniper titmouse, mountain bluebird, olive-sided flycatcher, mountain plover, loggerhead shrike, mourning dove, pinyon jay, Brewer's sparrow, sage thrasher, Bendire's Thrasher, and sage sparrow.

  The proposed action has the potential to have a negative effect upon individual birds, eggs, young and/or the nesting habitat of ground nesting birds; however, there would be no noticeable impact to the population or to the species as a whole. It is determined that the proposed action would have no impact on federally listed threatened or endangered species, and no adverse affect on federal proposed, candidate or BLM Sensitive species.

Chapter 2: Description of Alternatives

2.1 Alternative A: No Action

No Action would be to issue a 10 year term grazing permit/lease without any changes as outlined in Table 1. For additional information, refer to Allotment Evaluation documents available for each allotment at the TFO. See Appendix 1 for other terms and conditions for each allotment.

Table 1. Outline of allotment guidelines for permit renewal

Allotment Number	Livestock Type	Livestock Number	Season of Use	Total Federal Acres	Pastures	Grazing System	Proposed Improvements
00513	Cattle	38	11/01 – 4/30	3,349	1	Winter / spring use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00514	Cattle	215	10/15 - 10/31	270	1	Fall use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00515	Cattle	10	12/01 – 2/28	912	1	Winter use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00517	Cattle	10	6/15 – 12/01	1,860	1	Summer / fall use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00522	Cattle	74	3/01 – 2/28	22,738	3	Rotational	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00528	Cattle	269	12/01 – 5/10	13,439	4	Rotational	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00529	Cattle	100	11/01 – 3/05	7,755	3	Rotational	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00539	Cattle	63	11/01 – 2/28	6,021	1	Winter use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00636	Cattle	50	11/01 – 5/31	4,721	2	Winter / spring use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
Monitoring: BLM would continue the rangeland monitoring study program, continue to consult with the grazing permittee on placement of mineral and supplemental feed and continue monitoring for new populations of noxious weeds.							
** These will be addressed in a subsequent NEPA document if and when funding is available.							

2.2 Alternative B: Proposed Action

The Proposed Action is to issue a 10 year term grazing permit/lease without any changes as outlined in Table 1, except for the modifications in season of use and number of livestock for allotments 00514, 00515 and 00636 as outline in Table 2 below. The modification in allotment 00514 is to accommodate scheduling of the two BLM allotments and the Forest Service allotment the permittee holds. The modification for allotment 00515 is due to the request of the permittee to fully use his allocation of AUMs within the allotment. This proposal is to be accomplished by extending the season of use by one month. In allotment 00636, draft RMP completed in June 2010 excludes all portions of the allotment below the rim of the Rio Grande gorge for the protection of resources. This exclusion will change the size of the allotment to 1,292 acres and the AUMs to 168. All proposed renewals are in conformance with any revisions in the draft RMP. This proposal will also include roughly two-tenths of a mile of fencing (in four small segments) to ensure livestock do not enter the gorge. For additional information, refer to Allotment Evaluation documents available at the TFO. See Appendix 1 for other terms and conditions for each allotment.

Table 2. Outline of allotment guidelines for permit renewal

Allotment Number	Livestock Type	Livestock Number	Season of Use	Total Federal Acres	Pastures	Grazing System	Proposed Improvements
00514	Cattle	215	10/01 - 10/14	270	1	Fall use	Possible vegetation manipulation by fire, herbicide, or mechanical means **

00515	Cattle	10	12/01 - 3/31	912	1	Fall use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
00636	Cattle	300	10/15 - 10/31	1,292	1	Fall use	Possible vegetation manipulation by fire, herbicide, or mechanical means **
Monitoring: BLM would continue the rangeland monitoring study program, continue to consult with the grazing permittee on placement of mineral and supplemental feed and continue monitoring for new populations of noxious weeds.							
** These will be addressed in a subsequent NEPA document if and when funding is available.							

Location and Maps

00513 - Located approximately 2 miles northeast of Velarde, in Rio Arriba County, New Mexico. The allotment is located on the USGS Velarde 7.5 minute series topographic map. T. 22 N., R. 09 E. Sec 1 and 2; T. 22 N., R. 10 E. Sec 5 and 6; T. 23 N., R. 09 E. Sec 35 and 36; T. 23 N., R. 10 E. Sec 30-32.

00514 - Located approximately 5 miles southwest of Pilar, in Taos County, New Mexico. The allotment is located on the USGS Carson and Trampas Quadrangle 7.5 minute series topographic maps. T. 23 N., R. 10 E. Sec 1, 2 and 11.

00515 - Located approximately 3 miles southwest of Pilar, in Taos County, New Mexico. The allotment is located on the USGS Carson and Trampas 7.5 minute series topographic maps. T. 23 N., R. 10 E. Sec 1, 2, 11, 12 and 14.

00517 - Located approximately 2 miles northeast of Pilar, in Taos County, New Mexico. The allotment is located on the USGS Carson and Taos SW Quadrangle 7.5 minute series topographic maps. T. 24 N., R. 11 E. Sec 14, 15, 22, 23, 27 and 28.

00522 - Located just east and south of Velarde, in Rio Arriba County, New Mexico. The allotment is located on the USGS Chimayo, Lyden, San Juan Pueblo and Velarde Quadrangle 7.5 minute series topographic maps. T. 22 N., R. 09 E. and R. 10 E.

00528 - Located approximately 3 miles northwest of Chimayo, in Santa Fe and Rio Arriba Counties, New Mexico. Elevation on this allotment is roughly between 5,800 and 7,200 feet. The allotment is located on the USGS Chimayo, Cundiyo, Española and San Juan Pueblo Quadrangle 7.5 minute series topographic maps. T. 22 N., R. 09 E. Sec 31-35; T. 21 N., R. 09 E. Sec 2-21 and 28-33; T. 20 N., R. 09 E. Sec 4-6.

00529 - Located approximately 3 miles northeast of Chimayo, in Rio Arriba County, New Mexico. Elevation on this allotment is roughly between 6,500 and 7,600 feet. The allotment is located on the USGS Chimayo Quadrangle 7.5 minute series topographic map. T. 22 N., R. 09 E. Sec 35 and 36; T. 21 N., R. 09 E. Sec 1, 2, 12, 13 and 24; T. 22 N., R. 10 E. Sec 31-33; T. 21 N., R. 10 E. Sec 4-9, 16-21 and 28.

00539 - Located approximately 11 miles north northwest of Chimayo, in Rio Arriba County, New Mexico. The allotment is located on the USGS Lyden and Medanales 7.5 minute series topographic maps. T. 22 N., R. 07 E. Sec 1, 2, 12, 13, 24 and 25; T. 22 N., R. 08 E. Sec 3-9 and 17-20; T. 23 N., R. 07 E. Sec 36.

00636 - Located approximately 2 miles north of Rinconada in Taos and Rio Arriba Counties, New Mexico. The allotment is located on the USGS Taos Junction, Trampas and Velarde Quadrangle 7.5 minute series topographic maps. T. 23 N., R. 10 E. Sec 4-10.

See Appendix 2 for a map of the location of the allotments.

2.3 Alternative C: No Grazing

Do not issue grazing permits for these allotments, thereby suspending livestock grazing.

Chapter 3: Affected Environment

The Rio Chama-Rio Grande watershed is located between Taos and Espanola in Taos and Rio Arriba Counties, New Mexico. The 9 subject allotments comprise roughly 25% of the watershed that is within the TFO. Overland flow or runoff from this watershed drains into the Rio Grande. Topography within the subject allotments is varied; from relatively flat sagebrush steppe, on the mesas and plateaus, to the piñon and juniper woodlands on the dissected ridges and benches on the sandstone cliffs. Five allotments border or are within the Rio Grande gorge with breaks and rock outcroppings. Elevation across the allotments ranges from 5,800 to 7,100 feet.

In the evaluation process field crews completed the Rangeland Health Evaluation Summary Worksheet from BLM Technical Reference 1734-6: Interpreting Indicators of Rangeland Health for all the subject allotments. Results are summarized in Table 3 by Soil/Site Stability, Hydrologic Function and Biotic Integrity and averages by site. In Table 3 each percent is a "percent similar" indicator score. The indicator score is created by multiplying an assigned value for departure from site descriptions/reference areas by the number of indicators at the level. Departure scores are categorized as: none to slight = 5, slight to moderate = 4, moderate = 3, moderate to extreme = 2 and extreme = 1, thus giving the most similar sites the highest score. For example, if all indicators under Biotic Integrity were rated none to slight (5), the equation would be: (score) (nine indicators) / 45 X 100 = 100% similarity, or what is expected based on an Ecological Site Description. Those allotments that have multiple parcels or contain multiple Ecological Sites may have multiple Summary Worksheets, as shown in the Table 3 by the use of letters.

Table 3. Summary of indicators by allotment.

Allotment Number	Survey Date	Percent of Soil/Site Stability	Percent of Hydrologic Function	Percent of Biotic Integrity	Average Percentage
00513	8/29/2008	82%	80%	89%	84%
00514-a	8/29/2008	84%	80%	71%	78%
00514-b	8/8/2007	96%	96%	98%	97%
00515	8/8/2007	80%	76%	78%	78%
00517	7/11/2007	88%	86%	93%	89%
00522	8/8/2008	92%	92%	91%	92%
00528	8/7/2007	82%	84%	93%	86%
00529	7/11/2007	78%	74%	82%	78%
00539	9/9/2010	88%	86%	93%	89%
00636	9/9/2010	76%	72%	71%	73%

The TFO uses this tool to identify rangelands that may not be meeting Standards and Guidelines in order to make management decisions to improve public land health. If an allotment or pasture falls below 80% in the Soil Site Stability, Hydrologic, or Biotic indicators, and causal factors are not understood, more intensive monitoring would be established to determine the cause(s) of the low rating.

3.1 Water Quality

3.1.1 The subject allotments are located in Hydrologic Unit Code (HUC) 1302010111, or the Rio Chama – Rio Grande Watershed, which comprises 177,825 acres in the TFO. Of the acres within the TFO, the subject allotments comprise 44,770 acres. A portion of allotments 00767, 00929 and 00942 are within the Arroyo Aguaje de la Petaca Watershed as well. In conjunction with the United Sates Environmental Protection Agency (EPA), the New Mexico Environmental Department surveyed and evaluated perennial reaches in 2008 and identified impairments for stream reaches not meeting water quality standards for designated uses.

Table 4. Summary of BLM allotments by 10 Digit HUC by NMED evaluation unit.

NMED Assessment Unit	Watershed	Allotments	BLM Acreage	Percent of Watershed
NM-2111_10 NM-2120.A_300	Rio Chama – Rio Grande	00513, 00514, 00515, 00517, 00522, 00528, 00529, 00636	44,770	25%
NM-2111_41	Embudo Creek	00513	1,128	0.5%
NM-2111_50	Santa Cruz River	00528, 00529	5,207	4.5%
NM-2113_00	Rio Ojo Caliente – Rio Chama	00539	2,722	3.1%
NM-2113_10	Rio Ojo Caliente	00539, 00636	3,393	2.8%

No impairments were identified for the NM-2113_00 assessment unit – Rio Chama (San Juan Pueblo to Abiquiu Dam), NM-2113_10 assessment unit – Rio Ojo Caliente (Rio Chama to Rio Vallecitos), and NM-2120.A_300 – Rio de Truchas (Perennial Portions, Rio Grande to Headwaters).

The following impairments were identified:

NM-2111_10 assessment unit – Rio Grande (Non-Pueblo Santa Clara to Embudo Creek): Not supporting marginal coldwater fishery and warmwater fishery. Probable causes include benthic macroinvertaebrate bioassessments, PCB(s) in fish tissue and turbidity, with probable sources being atmospheric depositions, contaminated sediments, highway/road runoff, inappropriate waste disposal, loss of riparian habitat, agriculture and rangeland grazing.

NM-2111_41 assessment unit – Embudo Creek (Rio Grande to Canada de Ojo Sarco): Not supporting marginal coldwater and warmwater fishery use. Probable causes were sedimentation/siltation and turbidity with probable sources including channelization, dredging, loss of riparian habitat, off-road vehicle use, rangeland grazing, streambank modifications/destabilization and land development.

NM-2111_50, Santa Cruz River (Santa Clara boundary to Santa Cruz Dam): Not supporting marginal coldwater and warmwater fishery use. Probable causes were sedimentation with probable sources including dam construction, flow alterations from water diversions and irrigated crop production

3.2 Wildlife

3.2.1 The allotments are located in the Inter-Mountain Basins Semi-Desert Shrub Steppe, Inter-Mountain Basins Semi-Desert Grassland, Southern Rocky Mountain Pinyon and Juniper Woodland and Southern Rocky Mountain Juniper Woodland and Savanna. Existing habitat within the allotments include sagebrush steppe, woodland and savanna vegetation areas and supports seasonal home ranges for elk, mule deer, pronghorn, bighorn sheep, black bear, mountain lion, coyote, prairie dog, badger, black-tailed jackrabbit, desert cottontail, gopher, mice, bats, raptors, turkey vulture, American kestrel, common

nighthawk, broad-tailed hummingbird, Say's phoebe, common raven, horned lark, rock wren, reptiles, amphibians and a variety of insects.

3.3 Soils

3.3.1 Soils in the subject allotments consist of mainly loams but a list of soils from the Natural Resource Conservation Service (NRCS) Soil Survey of Taos County and parts of Rio Arriba and Mora counties, New Mexico (1982) are found below in Table 5. Soil descriptions can be found in each allotments file at the TFO within the Allotment Evaluation or in the NRCS soil survey.

Table 5. Soils found in the subject allotments by map unit.

Soil Map Units	Allotments
Chita loam, 0 to 5 percent slopes	00515, 00522, 00528, 00529, 00636
Dermala-Roced complex, 20 to 50 percent slopes	00515, 00522, 00528, 00529
Fernando-Hernandez association, nearly level	00514, 00636
Florita-Rock outcrop complex, 15 to 45 percent slopes	00515, 00522, 00528, 00539
Fruitland sandy loam, 3 to 5 percent slopes	00522
Orthents-Rock outcrop association very steep	00515, 00517, 00636
Parida-Palacid very gravelly sandy loams, 10 to 40 percent slopes	00515, 00522, 00528, 00529
Penistaja fine sandy loam, 2 to 8 percent slopes	00528, 00539
Petaca very stony loam, 1 to 15 percent slopes	00636
Petaca-Prieta complex, 1 to 8 percent slopes	00517
Pinavetes loamy sand, 3 to 12 percent slopes	00539
Razito-Fruitland complex, 1 to 5 percent slopes	00522, 00528
Royosa-Orthents association, moderately steep	00514, 00636
Royosa-Vibo association, moderately sloping	00636
Sedillo-Silva association, strongly sloping	00517
Silva loam, 2 to 10 percent slopes	00514
Silva-Sedillo association, gently sloping	00517, 00636
Trinaja-Rock complex, 45 to 75 percent slopes	00515, 00636
Yarts sandy loam, 1 to 4 percent slopes	00515, 00522, 00528, 00529

3.4 Upland Vegetation

3.4.1 Vegetation descriptions for the TFO are described by vegetation categories developed by Southwest Regional Gap Analysis Project (SWReGAP). The allotments are located in the Inter-Mountain Basins Big Sagebrush Shrubland and Southern Rocky Mountain Pinyon-Juniper Woodland. Vegetation expected for the subject allotments include: pinyon, juniper, sideoats grama, sagebrush, muttongrass, blue grama, western wheat, sideoats grama, fringed sagewort, winterfat, galleta, fourwing saltbush, needleandthread and other species in smaller amounts.

Chapter 4: Environmental Effects

4.1 Direct and Indirect Effects

This chapter describes the anticipated effects on the resource issues if the alternatives are implemented. The general effects of each alternative on resource categories are addressed. Direct effects are caused by

an action and occur at the same time and place. Indirect effects are caused by an action and occur later in time or farther removed in distance.

4.1.1 Alternative A: No Action

As described in section 2.1, the No Action alternative would re-issue grazing permits/leases without any changes.

4.1.1.1 Water Quality

Based on the AEs for the subject allotments there would not likely be increased water quality impairments resulting from the no action alternative. This conclusion is based on the site assessments showing some indicators of surface erosion as a factor to reduce water quality, but the causal factors were determined to be sources other than the current livestock grazing. It was identified that the most likely reason contributing to the possibility for increased erosion was the influence of woody species encroachment coupled with the lack of fire.

4.1.1.2 Wildlife

During the evaluation process there was no evidence to show wildlife were being adversely affected by livestock grazing. In fact, judicious grazing practices can have positive effects on wildlife and can be a beneficial management tool to increase vegetation composition and diversity, improve forage availability and quality for early to mid-successional wildlife species, create patchy habitat with high structural diversity for feeding, nesting and hiding, open up areas of dense vegetation to improve foraging areas for a variety of wildlife; remove rank, coarse grass that would encourage regrowth and improve abundance of high quality forage for wild ungulates, and improving nutritional quality of browse by stimulating plant regrowth (NMDGF 2005).

Studies in northern New Mexico have indicated that total elimination of grazing did not improve range condition on upland or lowland sites when compared with adjacent moderately grazed areas (Holechek and Stephenson 1985). Smith et al. (1996) found that lightly grazed climax rangelands and conservatively grazed late seral rangelands had similar songbird and total bird populations. They also concluded that wildlife diversity was higher on the conservatively grazed late seral than the lightly grazed climax rangeland. Studies in southeastern Arizona by Bock et al. (1984) support the hypothesis that conservatively to moderately grazed areas in mid or late seral condition supported greater diversity of wildlife than ungrazed areas in climax condition. Livestock grazing was also shown to enhance forage for elk and manage their distribution by increasing availability and nutritional value of preferred grasses in early growth stages (Holechek et al. 2004). Best management practices would ensure that forage production within this area can support wildlife and livestock on a sustained basis.

4.1.1.3 Soils

Under current management, soil indicators for the allotments range from poor to excellent. The lowest Soil and Site Stability rating was 76% (see Table 3). The lower ratings have been attributed to influences of historic grazing coupled with the lack of fire and subsequent sagebrush dominance and/or piñon / juniper encroachment, and not to current grazing management. Soil and Site Stability would ameliorate with the treatments recommended in Table 1 and 2.

4.1.1.4 Upland Vegetation

Under current management it has been determined that the current grazing systems within the subject allotments are not adversely effecting the vegetation. The lowest Biotic Integrity rating for the subject

allotments was 71% similarity to the Ecological Site Description (see Table 3). The lower ratings were attributed to the lack of natural disturbance and subsequent sagebrush and/or piñon / juniper expansion, and not current livestock grazing practices.

4.1.2 Alternative B: Proposed Action

As outlined in section 2.2, the Proposed Action would modify the terms and conditions within allotments 00514, 00515 and 00636.

4.1.2.1 Water Quality

The environmental effects expected for the proposed action would be the same as those stated in the No Action Alternative.

4.1.2.2 Wildlife

The environmental effects expected for the proposed action would be the nearly same as those stated in the No Action Alternative. The only difference would be that the construction of fences may make traveling into the gorge more difficult. This possible difficulty is greatly outweighed by the positive affect the fences have by restricting livestock from entering the gorge and protecting the spring's water resources.

4.1.2.3 Soils

The environmental effects expected for the proposed action would be the same as those stated in the No Action Alternative.

4.1.2.4 Upland Vegetation

The environmental effects expected for the proposed action would be the nearly same as those stated in the No Action Alternative. With the change of grazing in allotment 00636 to dormant season only, livestock will not be grazing during an active growing season, thus reducing any possible stress to vegetation.

4.1.3 Alternative C: No Grazing

As outlined in section 2.3, the No Grazing alternative would remove grazing from all of the subject allotments.

4.1.3.1 Water Quality

The environmental effects expected for the No Grazing alternative would be the same as those stated in the No Action Alternative due to the findings that current livestock grazing is not affecting water quality.

4.1.3.2 Wildlife

Removing livestock grazing may reduce or eliminate any potential for competition with wildlife.

4.1.3.3 Soils

Removing livestock grazing may reduce the amount of soil erosion by removing trampling during periods with little moisture.

4.1.3.4 Upland Vegetation

Removing livestock grazing may remove any stress to plants.

4.2 Cumulative Effects Analysis

A cumulative impact, as defined in 40 CFR 1508.7, is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other action.

4.2.1 Cumulative Actions

4.2.1.1 Past and Present Actions

Livestock grazing, past and present, is only one of several possible disturbance activities within the area. Historic grazing within the TFO initiated with the majority of the livestock being sheep with very little cattle. Over time, more and more operators changed their class of livestock from sheep to cattle. Today, the TFO only has one operator that runs sheep. Grazing practices historically where very different than today. Since the 1950s, actual grazing use across the BLM has dropped over 50%. Other past and present cumulative actions within the subject allotments include: off-road vehicles use, other recreational use and road construction and maintenance.

4.2.1.2 Reasonably Foreseeable Actions

Actions that are reasonably foreseeable include the vegetation manipulations outlined in Tables 1 and 2 and global climate change. In 2007, the Intergovernmental Panel on Climate Change (IPCC) predicted that by the year 2100, global average surface temperatures would increase 1.1 to 6.4°C above 1980 to 1999 levels. The National Academy of Sciences (2006) supports these predictions, but has acknowledged that there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures. It is not, however, possible at this time to predict with any certainty the causal connection of the Proposed Action or any other alternatives in this EA to impacts on the global/regional climate.

4.2.2 Cumulative Effects

4.2.2.1 Water Quality

No cumulative effects have been identified for water quality.

4.2.2.2 Wildlife

A vegetation manipulation will temporarily remove habitat and forage which may increase competition with the proposed livestock grazing, but the long-term benefit of increased forage and habitat outweigh any potential adverse effects.

4.2.2.3 Soils

With the possible disturbance caused by livestock grazing, off-road vehicle use, and the vegetation manipulations, the amount of erosion to the soils could increase. However, since livestock grazing will be

excluded from vegetation treatment areas for at least two growing seasons as a design feature to minimize possible adverse effects to soil stability, the cumulative effect could be negligible.

4.2.2.4 Upland Vegetation

Any new road construction will remove or disturb vegetation. A vegetation manipulation will temporarily remove vegetation, but will provide a long-term benefit of meeting the New Mexico Standards for Rangeland Health. Climate change has the ability to shift vegetation patterns and coupled with livestock grazing the shifts may be exacerbated. These shifts should be made evident by the allotment monitoring protocols, and will be addressed if and when they occur.

Chapter 5: Consultation and Coordination

5.1 Summary of Consultation and Coordination

The affected permittees/lessees and the interested public were given opportunity to do site visits to the allotments and comment on the Allotment Evaluations and Determination Documents (See section 1.4 for further information on public involvement). To date no comment has been made regarding the evaluation or analysis of the subject allotments.

5.2 List of Preparers

This document was prepared and reviewed by a team from the Taos Field Office. They include:

Merril Dicks - Archeologist
Scott Draney - Department of Game and Fish
Greg Gustina - Fish Biologist
Brad Higdon – Planning and Environmental Coordinator
Tami Torres - Outdoor Recreation Planner
Derek Trauntvein – Rangeland Management Specialist
Paul Williams – Archeologist
Valerie Williams - Wildlife Biologist
Jacob Young - Rangeland Management Specialist

Chapter 6: References

Bock, C.E., J.H. Bock, W.R. Kenny, and V.M. Hawthorne. 1984. Response of birds, rodents, and vegetation to livestock exclosure in a semidesert grassland site. Journal of Range Management 37: 239-242.

Holechek, J.L. and T. Stephenson. 1983. Comparison of big sagebrush vegetation in north central New Mexico under moderately grazed and grazing excluded conditions. Journal of Range Management 36: 455-456.

Holechek, J.L., T.T. Baker, and J.C. Boren. 2004. Impacts of controlled grazing versus grazing exclusion on rangeland ecosystems: what we have learned. New Mexico State University Cooperative Extension Service, Range Improvement Task Force Report 57. Las Cruces, New Mexico. 42 pp.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Basis (Summary for Policymakers). Cambridge University Press. Cambridge, England and New York, New York. (Available on the Internet: http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf)

National Academy of Sciences. 2006. Understanding and Responding to Climate Change: Highlights of National Academies Reports. Division on Earth and Life Studies. National Academy of Sciences. Washington, D.C. (Available on the Internet: http://dels.nas.edu/basc/Climate-HIGH.pdf.)

New Mexico Department of Game and Fish. 2005. Comprehensive Wildlife Conservation Strategy for New Mexico. New Mexico Department of Game and Fish. Santa Fe, New Mexico. 526 pp + appendices.

Smith, G., J.L. Holechek, and M. Cardenas. 1996. Wildlife numbers on excellent and good condition Chihuahuan Desert rangelands: an observation. Journal of Range Management 49: 489-493.

Soil Conservation Service Soil Survey of Taos County and parts of Rio Arriba and Mora Counties, New Mexico, 1982.

Appendix 1: Other Terms and Conditions

These Terms and Conditions apply to all of the subject allotments:

In accordance with 43 CFR 4130.3-1 this permit/lease is subject to cancellation, suspension, or modification for any violation of any regulation in 43 CFR subchapter D - Range Management (4000) or any Term or Condition of this permit/lease.

Livestock grazing may be delayed, discontinued or modified to allow for the protection of rangeland resources and values when there is a lack of plant growth as outlined in the Taos Field Office Range Readiness and Monitoring Plan for Grazing Allotments.

Improvements must be satisfactorily maintained prior to permit/lease begin date or authorization for grazing will not be issued until maintenance responsibilities are completed.

Maintain accurate actual use records detailing the dates and numbers of livestock placed on and removed from the grazing allotment(s) on a "by-pasture" and maintain records of the amount and type of approved supplemental feed consumed by livestock while on the allotment(s). These records are due in the Taos BLM office within 15 days of the permit/lease "off" date.

This list is specific by allotments:

00522 – Grazing will follow prescriptions outlined with the Allotment Management Plan.

00636 – Grazing will not be authorized until the gap fencing is completed.

Appendix 2: Map of subject allotments